

<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	10/749,363	MITCHELL, THOMAS A.	
	Examiner	Art Unit	
	F. L. Evans	2877	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the papers filed on December 31, 2003.
2. ☒ The allowed claim(s) is/are 1-45.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date <u>1203</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
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## **DETAILED ACTION**

### ***The Preliminary Amendment***

Receipt is acknowledged of the preliminary amendment filed on December 31, 2003.

### ***The Information Disclosure Statement***

The prior art cited in the information disclosure statement filed on December 31, 2003 has been considered.

### ***Additional Prior Art***

Stevens et al (US 6,078,048) disclose a spectrometer comprising a lens assembly that serves both as a collimator and condenser in a near aberration-free axially-symmetric arrangement.

Reel et al (US 6,690,467 B1) disclose optical systems comprising a collection lens system, a transmission grating, and a reimaging lens system. The collection lens is configured to receive and substantially collimate light. The transmission grating is configured to spectrally disperse the substantially collimated light from the collection lens system. The reimaging lens system is configured to receive the light from the light dispersing element and direct the light onto a light detection device.

### ***Allowable Subject Matter***

Claims 1-45 are allowed over the prior art of record.

### ***Examiner's Statement of Reasons for Allowance***

The following is an examiner's statement of reasons for allowance:

As to independent claim 1, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectrometer comprising at least one slit element located at an object plane and first and second optical sub-systems being designed substantially according to a symmetrical principle, the center plane being the plane of symmetry, in combination with the rest of the limitations of the claim.

As to independent claim 19, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectrometer comprising at least one slit element located at an object plane and first

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and second optical sub-systems comprising a substantially symmetrical relay system, the center plane being the plane of symmetry, in combination with the rest of the limitations of the claim.

As to independent claim 37, the prior art of record, taken alone or in combination, fails to disclose or render obvious a method of detecting wavelength dependent content of electromagnetic radiation comprising the steps of extracting at least one line source of electromagnetic radiation from a source of electromagnetic radiation and minimizing transverse aberrations while substantially collimating the electromagnetic radiation emanating from the at least one line source and imaging the angularly separated electromagnetic radiation, in combination with the rest of the limitations of the claim.

As to independent claim 38, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectrometer comprising means for extracting at least one line source of electromagnetic radiation from a source of electromagnetic radiation and means for minimizing transverse aberrations while substantially collimating the electromagnetic radiation emanating from the at least one line source and imaging the angularly separated electromagnetic radiation, in combination with the rest of the limitations of the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


***Fax/Telephone Numbers***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner whose telephone number is (571) 272-2414.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**F. L. EVANS**  
**PRIMARY EXAMINER**  
**ART UNIT 2877**

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January 18, 2006